

IN THE SPECIFICATION

Please amend paragraphs 0038, 0044, 0045, 0054, 0055, and 0059, as shown in the attached amended specification paragraph sheets.

IN THE CLAIMS

Please cancel claims 1-3, 9, 11, 13 and 17; amend claims 4-8, and 12, 14 and 15; and add new claims 18-19; as shown in the attached claim sheets.

AMENDED SPECIFICATION PARAGRAPHS

[0038] The capsule assembly 216 spins about a rotation axis A. A motor 222 in a head 220 rotates the upper rotor 202 around the axis A, along with the workpiece 50 and the lower rotor 204. Specifically, as shown in Figs. 4 and 5, the motor 222 drives a sleeve 223, which is supported radially in the head 220, by rolling-bearings 238. The head 220 is pivotably supported on an armature ~~262~~ 263 which is raised and lowered by an elevator 264. The head 220 can be raised to separate the walls 212, 214, of the rotors 202, 204 and can be lowered for bringing the walls 212, 214 towards each other.

[0044] Referring to Fig. 6, the rinser/dryer 200 may have the lower nozzle 226 and the purging nozzle ~~228~~ 230 in a base 239 having a coaxial, annular plenum 232. The plenum 232 has (e.g. four) drains 233 each of which is equipped with a valve, such as a pneumatically actuated poppet valve 234 for opening and closing the drain 233. The drains 233 preferably provide separate paths for conducting liquid of different types to appropriate systems for storage, disposal, or recirculation.

[0045] An annular shield or skirt 236 may be provided and extending around and downwardly from the upper chamber wall 212, above the plenum 232. The skirt 236 rotates with the upper chamber wall ~~214~~ 212 and upper rotor 202. Each outlet 245 is oriented to direct fluids exiting the capsule assembly 216 against the inner surface of the annular skirt 236. The inner surface is flared outwardly and downwardly to cause fluids to flow outwardly and downwardly toward the plenum 232 by centrifugal force. Thus, fluids tend to be swept through the plenum 232, toward the drains 233.

[0054] The latching mechanism 250 further includes an array of latching cams 262, each associated with a stepped section 260. The latching cams ~~254~~ 262 apply radial forces to the stepped portions 260.

[0055] As shown in Figs. 5 and 6, the latching mechanism 250 further includes an actuating ring 256, which is adapted to actuating the latching cams 262 as the actuating ring 256 is raised and lowered within a predetermined limited range of movement. The actuating ring 256 is raised up to actuate the latching cams 262, and lowered to deactuate the latching cams. ~~Pneumatic lifters 258 are~~ The lifting mechanism is adapted to raise and lower the actuating ring 256. When the actuating ring 256 is raised, the upper and lower chamber walls 212, 214, are released from each other so that the head 220 can be raised from the base ~~230~~ 239 for opening the upper and lower chamber walls 212, 214, or lowered onto the base for closing the upper and lower chamber walls 212, 214.

[0059] The motor 222 is turned on to spin the capsule assembly 216 (including the upper and lower rotors 202 and 204, and the wafer 50 held between them). A rinsing liquid, such as DI water, is introduced onto the upper and lower wafer surfaces via the inlets 237 and 215. The liquid spreads and flows radially outwardly over the wafer surfaces via centrifugal force and drains out the capsule assembly 216 via the outlets ~~2345~~ 245. The rinsing liquid covers or flows over all areas of the workpiece, rinsing away process chemicals remaining on the workpiece from prior processes. The

capsule 216 is then typically accelerated to a higher spin speed to remove remaining droplets of rinsing liquid, via centrifugal force. A drying gas may then be applied a gas supply, such as nitrogen supply 290 in Fig. 3. The drying gas, such as air or nitrogen, may be heated via a gas heater 292. When the workpiece is dry, the elevator 264 lifts the head 220 to open the capsule 216. As this occurs, the lifting mechanism 258 lifts the workpiece. The second transfer robot 118 removes the clean and dry workpiece 50 from the rinser/dryer 200, and moves it into a clean cassette 120.